CLAIMS

What is claimed is:

1. In an implantable cardiac stimulation device, a method comprising:

detecting intrinsic atrial events based on an initial atrial sensitivity level;

selectively delivering atrial pacing pulses to at least one atrium and monitoring for loss of capture of the atrial pacing pulses;

increasing the atrial sensitivity level upon detecting a predetermined number of losses of capture and monitoring for lower-amplitude atrial events;

if lower amplitude atrial events are detected, determining whether the lower amplitude atrial events are true intrinsic atrial events;

if lower-amplitude atrial events are not detected, resetting the atrial sensitivity to the initial value; and

controlling selected functions of the device based on any true intrinsic atrial events.

2. The method of method claim 1 wherein the device is capable of automatically switching between a tracking mode and a non-tracking mode and wherein controlling selected functions of the device further comprises:

determining a filtered atrial rate interval (FARI value) based only on intrinsic atrial events; and

controlling mode selection based on the FARI value.

3. The method of claim 2 wherein controlling mode selection based on the FARI value comprises:

comparing the FARI value with an atrial tachycardia detection rate (ATDR) threshold;

if the FARI value exceeds the ATDR threshold while the device is in the tracking mode, switching to the non-tracking mode; and

if the FARI value falls below the ATDR threshold while the device is in the non-tracking mode, switching to the tracking mode.

4. The method of claim 3 wherein determining whether the lower amplitude atrial events are true intrinsic atrial events comprises:

detecting ventricular events;

determining a degree of variability to an interval between atrial events and ventricular events; and

if the degree of variability exceeds a variability threshold, identifying the atrial events as intrinsic atrial events; and

if the degree of variability falls below the variability threshold, ignoring the atrial events.

5. The method of method claim 1 wherein controlling selected functions of the device further comprises:

inhibiting generation of atrial pacing pulses if the lower-amplitude atrial events are identified as true intrinsic atrial events due to possible atrial tachycardia.

6. In an implantable cardiac stimulation device, a pacing system comprising:

an atrial sensing system operative to detect atrial events;

an atrial pacing system operative to deliver atrial pacing pulses;

an automatic capture detection system operative to detect loss of capture of the atrial pacing pulses; and

an atrial tachycardia detection system operative to increase a sensitivity by which the atrial sensing system detects atrial events upon detection of a predetermined number of losses of capture and to detect atrial tachycardia based on lower amplitude atrial events detected using the increased sensitivity.

7. The pacing system of claim 6 wherein the system is capable of operating in a tracking mode and a non-tracking mode and wherein the system further includes:

a filtered atrial rate interval (FARI) detection system operative to determine a filtered atrial rate based on only atrial-sensed events; and

an automatic mode switching system operative to determine whether to switch tracking modes based on the FARI.

8. In an implantable cardiac stimulation device, a pacing system comprising:

means for detecting atrial events;

means for delivering atrial pacing pulses;

means for detecting loss of capture of the atrial pacing pulses;

means for increasing a sensitivity by which the atrial events are sensed upon detection of a predetermined number of losses of capture; and

means for detecting atrial tachycardia based on lower amplitude atrial events detected using the increased sensitivity.